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July 24, 2006

TO: Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attn: Art Unit 2133 - Examiner Chaudry, Mujtaba M

FROM: Stephen B. Ackerman, Reg. No. 37,761
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SUBJECT: Serial #: 10/705,597
File Date: 11/10/2003
Inventor: Anand Anandakumar
Examiner: Chaudry, Mujtaba M
Art Unit: 2133
Title: High Data Rate Communication System for Wireless Applications


RESPONSE TO RESTRICTION REQUIREMENT

Dear Sir:

This is in response to the Restriction Requirement in the Office Action dated June 23, 2006. In that office action, restriction was required to one of the following Inventions under

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents P.O. Box 1450, Alexandria, VA 22313-1450 on July 24, 2006.

Signature 
Stephen B. Ackerman, Reg. No. 37,761

Date: July 24, 2006

35 U.S.C. 121:

The inventions stated are:

I. Claims 1-5 drawn to a decoding system in a communication system comprising a first and second decoder using soft-input information, classified in class 714, subclass 780.

II. Claims 6-16 drawn to an apparatus for iteratively decoding data in a communication system with computation of forward and backward metrics, classified in class 714, subclass 796.

III. Claims 17-24, drawn to a soft-input soft-output (SISO) decoding method having first and second multiplexing means, classified in class 714, subclass 791

IV. Claims 25-39, drawn to a method for decoding data using trellis diagram in communication system, classified in class 714, subclass 792.

Applicant provisionally elects to be examined the Invention described by the Examiner as Group I – Claims 1-5 drawn to a decoding system classified in Class 714, subclass 780. This election is made with traverse of the requirement under 37 C.F.R. 1.143 for the reasons given in the following paragraphs.

The Examiner is respectfully requested to reconsider the Requirement for Restriction in the Office Action.

The Examiner states that Inventions I and II are related as combination and subcombination, and gives as the reasons for distinctness that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations. (M.P.E.P. 806.05(c)). However, upon reading the Invention II Claims against the Claims of Invention I, it can be seen that Invention II is drawn to a decoder for a communication system, while Invention I is also drawn to a decoder for a communication system. As such, the field of search must necessarily cover both the Group I class/subclass 714/780 and the Group II class/subclass 714/796, in addition to other related Classes and subclasses to provide a complete and adequate search. The fields of search for the Group I and Group II inventions are clearly and necessarily co-extensive. The Examiner's suggestion that "In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claims of Group I do not require the limitations of iteratively decoding data with computation of forward and backward metrics" and "The subcombination has separate utility such as in a single networked environment" is speculative and has little to do with the Claims as presented in this patent application.

The Examiner states that Inventions I and III are related as combination and subcombination, and gives as the reasons for distinctness that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability,

and (2) that the subcombination has utility by itself or in other combinations. (M.P.E.P. 806.05(c)). However, upon reading the Invention III Claims against the Claims of Invention I, it can be seen that Invention III is drawn to soft-input soft-output decoding block, while Invention I is drawn to a decoder for a communication system. As such, the field of search must necessarily cover both the Group I class/subclass 714/780 and the Group III class/subclass 714/791, in addition to other related Classes and subclasses to provide a complete and adequate search. The fields of search for the Group I and Group III inventions are clearly and necessarily co-extensive. The Examiner's suggestion that " In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claims of Group I do not require the limitations of a soft-input soft-output (SISO) decoding method having first and second multiplexing means. The subcombination has separate utility such as in a single networked environment" is speculative and has little to do with the Claims as presented in this patent application.

The Examiner states that Inventions I and IV are related as combination and subcombination, and gives as the reasons for distinctness that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations. (M.P.E.P. 806.05(c)). However, upon reading the Invention IV Claims against the Claims of Invention I, it can be seen that Invention IV is drawn to a method of decoding soft-input symbol block data, while Invention I is drawn to a decoder for a communication system. As such, the field of search must necessarily cover both the Group I class/subclass

714/780 and the Group IV class/subclass 714/792, in addition to other related Classes and subclasses to provide a complete and adequate search. The fields of search for the Group I and Group IV inventions are clearly and necessarily co-extensive. The Examiner's suggestion that "in the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claims of Group I do not require the limitations of a method for decoding data using trellis diagram. The subcombination has separate utility such as in a single networked environment" is speculative and has little to do with the Claims as presented in this patent application.

The Examiner states that Inventions II and III are related as combination and subcombination, and gives as the reasons for distinctness that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations. (M.P.E.P. 806.05(c)). However, upon reading the Invention III Claims against the Claims of Invention II, it can be seen that Invention III is drawn to soft-input soft-output decoding block, while Invention II is drawn to a decoder for a communication system. As such, the field of search must necessarily cover both the Group II class/subclass 714/796 and the Group III class/subclass 714/791, in addition to other related Classes and subclasses to provide a complete and adequate search. The fields of search for the Group II and Group III inventions are clearly and necessarily co-extensive. The Examiner's suggestion that "in the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claims of Group II do not require the limitations of a soft-input soft-output (SISO) decoding method having first and second multiplexing

means. The subcombination has separate utility such as in a single networked environment" is speculative and has little to do with the Claims as presented in this patent application.

The Examiner states that Inventions II and IV are related as combination and subcombination, and gives as the reasons for distinctness that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations. (M.P.E.P. 806.05(c)). However, upon reading the Invention IV Claims against the Claims of Invention II, it can be seen that Invention IV is drawn to a method of decoding soft-input symbol block data, while Invention II is drawn to a decoder for a communication system. As such, the field of search must necessarily cover both the Group II class/subclass 714/796 and the Group IV class/subclass 714/792, in addition to other related Classes and subclasses to provide a complete and adequate search. The fields of search for the Group II and Group IV inventions are clearly and necessarily co-extensive. The Examiner's suggestion that "in the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claims of Group II do not require the limitations of a method for decoding data using trellis diagram. The subcombination has separate utility such as in a single networked environment" is speculative and has little to do with the Claims as presented in this patent application.

The Examiner states that Inventions III and IV are related as combination and subcombination, and gives as the reasons for distinctness that (1) the combination as

claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations. (M.P.E.P. 806.05(c)). However, upon reading the Invention IV Claims against the Claims of Invention III, it can be seen that Invention IV is drawn to a method of decoding soft-input symbol block data, while Invention III is drawn to a soft-input soft-output (SISO) decoding method. As such, the field of search must necessarily cover both the Group III class/subclass 714/791 and the Group IV class/subclass 714/792, in addition to other related Classes and subclasses to provide a complete and adequate search. The fields of search for the Group III and Group IV inventions are clearly and necessarily co-extensive. The Examiner's suggestion that "in the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claims of Group III do not require the limitations of a method for decoding data using trellis diagram. The subcombination has separate utility such as in a single networked environment" is speculative and has little to do with the Claims as presented in this patent application.

Further, it is respectfully suggested that these reasons are insufficient to place the added cost of additional Patent Applications upon the Applicants. Therefore, it is respectfully requested that the Examiner withdraw this restriction requirement for these reasons.

Withdrawal of the Restriction Requirement, and allowance of the present Patent Application, is respectfully requested.

It is requested that should there be any problems with this response, please call the undersigned Attorney at (845) 452-5863.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'SBA', is written over the typed name.

Stephen B. Ackerman, Reg. No, 37,761